

**HYBRID COHERENT-OPTICAL, RF SIGNAL CHANNELIZER****ABSTRACT**

An optical channelizer system that is adapted to provide instantaneous RF signal channelization at frequencies on the order of 100 GHz or more into channels having bandwidth  
5 as small as a few megahertz. In order to improve the channel resolution the optical channelizer system is formed from a plurality of parallel sub-channelizers, for example, twenty-five parallel sub channelizers which can provide 1 GHz channel spacing and 40 MHz signal resolution.